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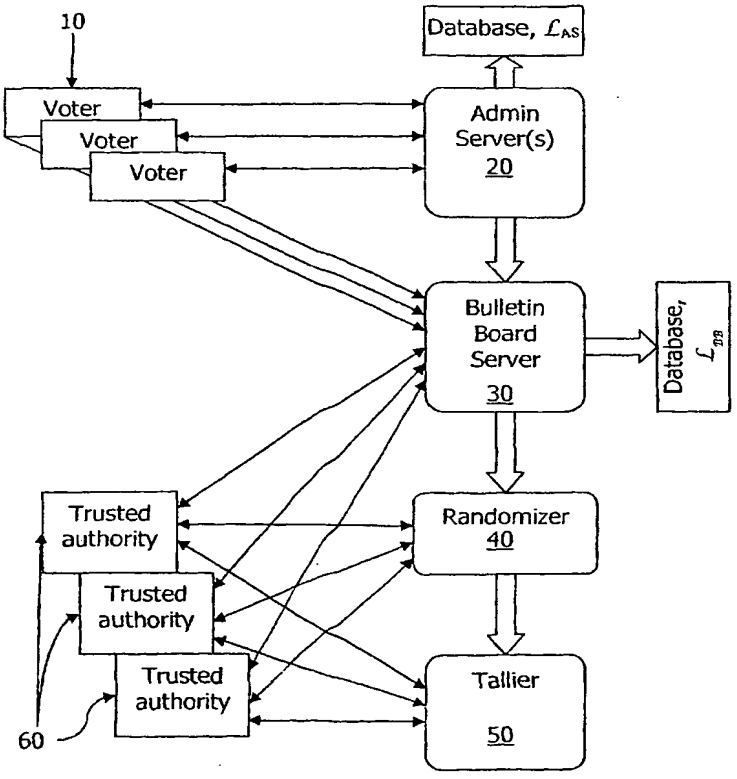
(54) Title: ELECTRONIC VOTING PROCESS USING FAIR BLIND SIGNATURES



(57) Abstract: In an electronic voting process, a voter (Vi) encrypts his vote (vi) according to the encryption scheme ($E_?$) of a tallier mix-net (50) used to tally up the votes cast. The voter (Vi) obtains on his encrypted vote, (xi), from an admin server module (20), a digital signature according to a fair blind signature scheme (FBSS). The encrypted vote (xi) is encrypted a second time, together with the unblinded digital signature (yi) thereof by the admin server, using the encryption scheme (E_M) of a randomizing mix-net (40), to yield an output (ci), and the voter uses his own signature scheme (S_i) to sign this, giving (σ_i). The voter sends an ID code and data including (c_i, σ_i) to a bulletin board server (30). Discrepancies in this vote data can be detected and their origin traced by prompting the randomizing mix-net servers (40) to provide proofs of correctness, and using the signature-tracing mechanism of FBSS.

WO 2005/096544 A2